AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A transmission diversity detection circuit for notifying presence or absence of a transmission diversity of spread spectrum communication by modulation of SCH (Synchronization channel), comprising:

arithmetic means for calculating a calculated value of $C_{2n,0} \times S_{2n,0}^* + C_{2n,0}^* \times S_{2n,0} + C_{2n,1}^* \times C_{2n,1}$,

in first and second symbols in a predetermined number of series of slots with respect to a reception signal, taking a primary CPICH (common pilot channel) symbol with respect to said first symbol as $C_{2n,0}$, a SCH symbol with respect to said first symbol as $S_{2n,0}$, a primary CPICH symbol with respect to said second symbol as $C_{2n,1}$ ~~and a SCH symbol with respect to said second symbol as S2n,1~~;

taking a complex conjugate of said primary CPICH symbol $C_{2n,0}$ as $C_{2n,0}^*$, a complex conjugate of SCH symbol $S_{2n,0}$ as $S_{2n.0}^*$, a complex conjugate of said primary CPICH symbol $C_{2n,1}$ as $C_{2n,1}^*$ ~~and a complex conjugate of said SCH symbol S2n,1 as S2n,1*~~; and

judgment means for making judgment whether transmission diversity is present or not depending upon positive or negative of said calculated value.

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2.   (currently amended): A transmission diversity detection circuit as set forth in

claim 1, wherein said arithmetic means comprises:

circuits for deriving said complex conjugate $C_{2n,0}^{*}$ of said primary CPICH symbol $C_{2n,0}$, a

complex conjugate $S_{2n,0}^{*}$ of SCH symbol $S_{2n,0}$, and a complex conjugate $C_{2n,1}^{*}$ of said primary

CPICH symbol $C_{2n,1}$.and a complex conjugate $S_{2n,1}^{*}$ of said SCH symbol $S_{2n,1}$;

multipliers calculating $C_{2n,0}$ x $S_{2n,0}^{*}$, $C_{2n,0}^{*}$ x $S_{2n,0}$ and $C_{2n,1}^{*}$ x $C_{2n,1}$; and

an adder calculating a sum of $C_{2n,0}$ x $S_{2n,0}^{*}$ + $C_{2n,0}^{*}$ x $S_{2n,0}$ + $C_{2n,1}^{*}$ x $C_{2n,1}$,

said judgment means makes judgment whether transmission diversity is performed or not

depending upon positive or negative of sign of said sum.

3.   (original): A transmission diversity detection circuit as set forth in claim 1,

wherein said predetermined slot is even numbered slots in one frame, said first and second

symbols are (0)th and first symbols of said slot.

4.   (original): A transmission diversity detection circuit as set forth in claim 1,

wherein said arithmetic means performs arithmetic operation upon performing communication.

5. (original): A transmission diversity detection circuit as set forth in claim 1, wherein said arithmetic means performs arithmetic operation upon registration of position for communication.

6. (currently amended): A transmission diversity detection method for notifying presence or absence of a transmission diversity of spread spectrum communication by modulation of SCH (Synchronization channel), comprising:

~~calculating step for~~ calculating a calculated value of $C_{2n,0} \times S_{2n,0}{}^{*} + C_{2n,0}{}^{*} \times S_{2n,0} + C_{2n,1}{}^{*} \times C_{2n,1}$, in first and second symbols in a predetermined number of series of slots with respect to a reception signal, taking a primary CPICH (Common pilot channel) symbol with respect to said first symbol as $C_{2n,0}$, a SCH symbol with respect to said first symbol as $S_{2n,0}$, and a primary CPICH symbol with respect to said second symbol as $C_{2n,1}$ ~~and a SCH symbol with respect to said second symbol as $S_{2n,1}$~~, and taking a complex conjugate of said primary CPICH symbol $C_{2n,0}$ as $C_{2n,0}{}^{*}$, a complex conjugate of SCH symbol $S_{2n,0}$ as $S_{2n,0}{}^{*}$, and a complex conjugate of said primary CPICH symbol $C_{2n,1}$ as $C_{2n,1}{}^{*}$ ~~and a complex conjugate of said SCH symbol $S_{2n,1}$ as $S_{2n,1}{}^{*}$~~; and

judging ~~step for making judgment~~ whether transmission diversity is present or not depending upon positive or negative of said calculated value.

7. (currently amended): A transmission diversity detection method as set forth in

claim 6, wherein said calculating step comprises ~~steps of~~:

deriving said complex conjugate $C_{2n,0}^*$ of said primary CPICH symbol $C_{2n,0}$, a complex

conjugate $S_{2n,0}^*$ of SCH symbol $S_{2n,0}$, <u>and</u> a complex conjugate $C_{2n,1}^*$ of said primary CPICH

symbol $C_{2n,1}$.~~and a complex conjugate $S_{2n,1}^*$ of said SCH symbol $S_{2n,1}$~~;

calculating $C_{2n,0} \times S_{2n,0}^*$, $C_{2n,0}^* \times S_{2n,0}$ and $C_{2n,1}^* \times C_{2n,1}$; and

calculating a sum of $C_{2n,0} \times S_{2n,0}^* + C_{2n,0}^* \times S_{2n,0} + C_{2n,1}^* \times C_{2n,1}$,

said judging step ~~makes judgment~~<u>judges</u> whether transmission diversity is performed or

not depending upon positive or negative of sign of said sum.

8. (original): A transmission diversity detection method as set forth in claim 6,

wherein said predetermined slot is even numbered slots in one frame, said first and second

symbols are (0)th and first symbols of said slot.

9. (currently amended): A storage medium storing a program implementing a

transmission diversity detection method for notifying presence or absence of a transmission

diversity of spread spectrum communication by modulation of SCH (Synchronization channel),

said program comprising:

~~calculating step for~~ calculating a calculated value of $C_{2n,0} \times S_{2n,0}^* + C_{2n,0}^* \times S_{2n,0} + C_{2n,1}^* \times C_{2n,1}$, in first and second symbols in a predetermined number of series of slots with respect to a

reception signal, taking a primary CPICH (Common pilot channel) symbol with respect to said

first symbol as $C_{2n,0}$, a SCH symbol with respect to said first symbol as $S_{2n,0}$, and a primary

CPICH symbol with respect to said second symbol as $C_{2n,1}$ ~~and a SCH symbol with respect to~~

~~said second symbol as $S_{2n,1}$~~, and taking a complex conjugate of said primary CPICH symbol $C_{2n,0}$

as $C_{2n,0}^*$, a complex conjugate of SCH symbol $S_{2n,0}$ as $S_{2n,0}^*$, and a complex conjugate of said

primary CPICH symbol $C_{2n,1}$ as $C_{2n,1}^*$ ~~and a complex conjugate of said SCH symbol $S_{2n,1}$ as~~

~~$S_{2n,1}^*$~~; and

judging ~~step for making judgment~~ whether transmission diversity is present or not

depending upon positive or negative of said calculated value.

10.   (currently amended): A storage medium as set forth in claim 9, wherein said

calculating step comprises ~~steps of~~:

deriving said complex conjugate $C_{2n,0}^*$ of said primary CPICH symbol $C_{2n,0}$, a complex

conjugate $S_{2n,0}^*$ of SCH symbol $S_{2n,0}$, a complex conjugate $C_{2n,1}^*$ of said primary CPICH symbol

$C_{2n,1}$ and a complex conjugate $S_{2n,1}^*$ of said SCH symbol $S_{2n,1}$;

calculating $C_{2n,0} \times S_{2n,0}^*$, $C_{2n,0}^* \times S_{2n,0}$ and $C_{2n,1}^* \times C_{2n,1}$; and

calculating a sum of $C_{2n,0} \times S_{2n,0}^* + C_{2n,0}^* \times S_{2n,0} + C_{2n,1}^* \times C_{2n,1}$,

said judging step ~~makes judgment~~judges whether transmission diversity is performed or

not depending upon positive or negative of sign of said sum.

11.   A storage medium as set forth in claim 9, wherein said predetermined slot is even numbered slots in one frame, said first and second symbols are (0)th and first symbols of said slot.